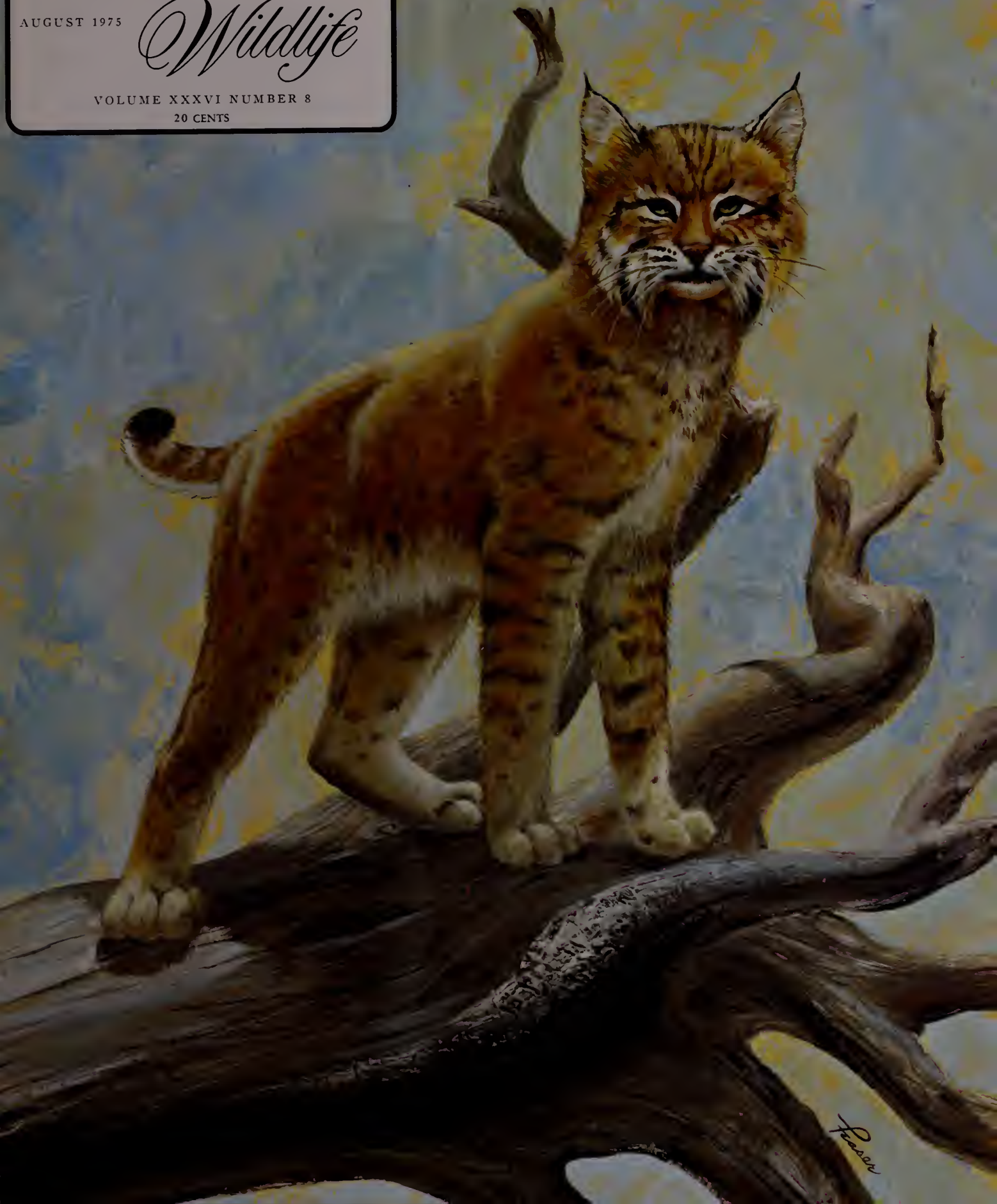


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AUGUST 1975  
*Wildlife*

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# Virginia Wildlife

**Dedicated to the Conservation of  
Virginia's Wildlife and Related Natural Resources  
and to the Betterment of  
Outdoor Recreation in Virginia**

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Observations, conclusions and opinions expressed in *Virginia Wildlife* are those of the authors and do not necessarily reflect those of the members or staff of the Commission of Game and Inland Fisheries.

**COVER:** Bobcat, by Daniel Feaser of Shepherdstown, West Virginia.

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## Turning The Corner

AS our bicentennial observance picks up momentum our national symbol, the bald eagle, proliferates on a variety of commemorative pieces. If the noble bird himself were doing so well it would truly be a time for rejoicing. During the last two decades of our 200 year history it appeared that Ben Franklin's nominee, the wild turkey, would have been a better choice. Turkeys were proliferating (with help) and becoming important game species in more and more states while eagle numbers slipped rapidly downward. Nesting figures for 1975 just released by the National Audubon Society indicate that this disastrous decline may have halted. Numbers of young hatched have actually leveled off and shown a slight increase during the past three years.

Just what gave the big birds this much needed boost is difficult to pinpoint. The recent severe restrictions on the use of DDT and other persistent pesticides is one possibility. Endangered Species status for the bald eagle certainly helped emphasize its plight to millions of Americans and gained it added protection from thoughtless destruction. The National Wildlife Federation recently announced payment of a \$500 reward to a Tennessee duck hunting guide who turned in a Memphis physician for shooting a bald eagle from a duck blind on Tennessee's Reelfoot Lake. The doctor claimed he thought it was a hawk, also a federally protected bird. The judge levied a fine of \$1000 and admonished the defendant, "We must protect our endangered species so that our children will have something to look at." Even western ranchers have recently felt the heat of public opinion against those who would wantonly slaughter these birds. Increased evaluation of environmental impact before development undoubtedly spared some eagle nests and habitat. Even the only existing bald eagle refuge, Masons Neck on the Potomac River in Virginia, has had to fight for survival, but survive it has. Perhaps the saving of the bald eagle, if successful, will mark a turning point where this country abandoned the wasteful and wanton ways of the past for a more enlightened course toward the future.

Audubon survey figures showed 75 active nests in the Chesapeake Bay region during the 1975 nesting season. Thirty-one of these attempts were successful, hatching 46 young eagles, the greatest number from the bay area since 1957. Five of the nests were damaged by unusually severe April winds. Virginia eagles attempted 32 nests, seven of which were successful in producing nine young, about on par with figures from the late sixties and early seventies. Virginia's 1973 and '74 seasons were considerably better, however. In Maryland the eagle population is booming with a 57% hatching success. With a little push our emblem may hang in there to inspire us for our next 200 years.—H. L. G.

## LETTERS

### Eel Edibility

I was looking through an old issue of *Virginia Wildlife* (August 1974) and found an article by E. L. Steinkoenig on the American eel to be both interesting and educational. But he was very misinformed concerning the taste of eel. They are considered one of the best fish for eating that you can catch in our freshwater streams and rivers.

James E. Cobbs  
Howardsville

*I've eaten eel and would compare it favorably with catfish.—Ed.*

### Unusual Visitor

SINCE late winter we have seen feeding in our back yard a male cardinal that is definitely a mutation. He is a beautiful red with the usual brown wings, but has no black on him at all. At first, the other cardinals (at least four or five) tried to keep him from getting the seed, but now they seem to have accepted him. He is able to eat beside them without a fight. We do not know if he nests with the others.

Virginia R. Hibben  
Alexandria

### Out of Range

WE greatly appreciate your bringing to our attention the specimen of a smooth earth snake found in Scott County by Ms. Charlotte Howington. According to our records, Scott County is out of range for this species. We would request that the specimen be placed on loan to the US National Museum of Natural History (Smithsonian Institution), Division of Reptiles and Amphibians. We have one Virginia Herpetological Society member from Scott County and relatively few records.

F. J. Tobey, Jr., Editor  
Virginia Herpetological Soc. BULLETIN  
P. O. Box 1376, Leesburg, Va.

### Black Snake Attacks, Retreats

ON August 17, 1974, while my family and guests were having lunch, someone looked out of our dining room window and saw this 5-foot black snake poised on the top strand of an American wire fence. I grabbed my camera, a 135mm, and removed the strobe so I could use available light without disturbing the reptile. Four pictures were made in approximately 2 seconds; there was no sun at the time.



The snake is attacking a glass red bird (left top) that is nailed to the post. I did not kill the snake. Seldom do we see snakes or other wild creatures "doing their thing" when we have a camera.

Bill Humphries  
Strasburg

# SCIENTIFIC BRIM FISHING



Don't Knock It 'Till You've Tried It!

By WILLIAM W. SADLER  
*Ashland*

THE cork submerges, and it stays a second as you chomp the side off your tongue. Yanking back on the pole like Grandma beating a wild dog with a broom stick, you find another old blue has slipped back into his grassy niche, one trick wiser and one worm fatter than before all the bango works (hook, line, sinker, and bright red cork) floated into his territory.

I know, your Pa caught "big brim" all his life using a jig pole with a carpenter cord line, a wheel lug sinker, and a cork the size of your fist. He missed a devil of a lot of them too!!

Fishermen generally understand the purpose of countershading on the float. They know about the sensitive lateral line on a fish which registers vibrations such as those generated by the cork and sinker upon casting and even the minute ones caused by the cork's rebound after a strike. A tremendous amount of study and hours of experimentation are expended to determine the length of time required to set the hook after the strike and which size and type of cork should be used for bluegills in specific currents and winds. The big corks are swept past the "hot spots" too quickly, while the small ones disappear every time the worm sneezes. There are many remedies: slip-type cork; automatic snag; the tip-up, the tapered, and the unpainted ones, to mention a few.

Many trials are run by serious fishermen to determine proper distance between hook and sinker to allow that "free floating" effect of bait. Much methodology is used to compensate for the drag a fish feels from the sinker's weight before the cork's drag even enters the reaction.

You employ just the right angle, just the right torque

that's required to snag a big brim that is running precisely the way this one is running. *Straight* at you!!! Works great on paper, doesn't it??

Those "old boys" hang by and watch all the hardware float around and eye the little fellows as they run, and swallow, and thrash about, then leave to stink someone's skillet. They gulp down all the fragmented bait and smile at the festivities.

Brim grasp any loose end of a worm not threaded on the hook and suck it off or nibble at its water logged body until it floats free. The more loose ends there are, the fatter the feast. Usually, the big blue grabs the hook/bait firmly in his mandible, flat wise, and from instinct clamps down on it to test its livelihood (much like an old bass tests a plastic worm). Then, he generally runs some distance, and stops to feed after he is in his own staked territory and sure there is nothing "unusual" about this morsel. Old brim have been seen to spit out a baited hook, seemingly suspicious of the drag created by the line and sinker. Sight of this white bottomed ball crashing at him from above when he hits bait is enough to cause an old tom to raise one eyebrow and restudy the situation.

Quite simply, all those corks, the fleet of bright shiny bobbbers and the big pinch-type anchors swinging beneath them could hold a clue to poor yields in fishing for big bluegills. When fly fishermen don't get bites on popping bugs nor on wet flies, they usually put on a worm, pinch on a sinker, snap on a cork, and with this they join the "jerking," "cussing," and "hanging up" majority of bluegill fishermen.

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A few simple tactics can take those pound-size toms that have been swallowing up two-ounce tree frogs, breaking after three-inch grasshoppers and sporadically appearing on farm boy's fish chains while you, your mepps, shisters, micro-spoons, and fanfare are under roots, around limbs, and plucking loops out of your mono-bird nests.

A long keen flyrod with a small light reel full of semi-floating tip line, an eyelet inserted to eliminate excessive knots, 2½ feet of 6 lb. monofilament leader, a couple of 3.0 split shots could put you on to some profitable fishing. Flyrod and reel are necessary to allow rapid line feeding and retrieve while providing cast control. A jerk pole with a fixed line quite naturally inhibits both line feeding and bait placement.

Contemplate the rationale of this sketch. When a fish picks up bait attached to a sinker/hook assembly, he can pull the bait only within the fixed circumference of a pendulum's swing before he feels the unnatural drag of the cork. (He has felt the sinker prior to this.) When the angler reacts to a strike by pulling the line taut, the cork changes the direction of the force on the line. This change in direction often removes the hook from the fish's mouth because the angle of your strike was not transferred as intended.

A small No. 12 hook with just enough worm threaded on to cover the barb and most of the shank, tied with a small fisherman's knot to a 2½ foot tippet, allows that old boy to run with the bait as far and as fast as he wants. Only the drag of the fly line slipping through the water inhibits his run. The fly reel comes in when you've got out 10 feet of line to reach a special willow pool and the old tom wants to go into his lair five feet further. Rip off the line and let him go.

The hook and bait provide enough weight to start a natural descent toward the bottom of a fairly still pool, and a gentle whip of the outstretched line will lift the bait to fall again with a teasing action that's hard to resist. When the fish stops his run or when he is taking out line solidly enough that you feel he has swallowed, the hook can be set by gently raising the rod tip and taking up slack.

"Hook set" control is greater due to the transfer of the strike force directly to the hook shank rather than through the right angle cork assembly.

In swift water, say a swirl pool at the foot of a falls or overrun, the No. 3.0 split shot cast into the current is forced down rather rapidly and gets circulated about freely with the natural swirl of debris. Little effort is involved to rollcast the bait back into the pool. If a split won't carry the bait down in the pool, more than likely the old boys are at the filter-out point anyway, so let the bait float to them and settle out there. Several blues might be taken on a minute section of thick-skinned Canadian night crawlers. Red wigglers are good but don't stand up as well to the "crush test," to casting, or to long periods of water exposure.

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In casting small streams and pools with slow current, cast ahead of the "good hole" as usual, but keep several loops of "running line" in your stripping hand in case an old fellow strikes the taut line. In all cases keep your rod tip toward the line and horizontal to the water to minimize line drag when he is running and testing.

We all know that a small hook and tidbit of worm is going to attract one million small brim, and it might become tiresome taking them off. However, fishing in this manner allows you to fish where fly fishermen fish but with a "natural and genuine" food source. It allows you to get under the willows and behind logs where the old toms guard their territory. The line control previously mentioned reduces the amount of snagging that is experienced with the vertical aspects of a cork/sinker arrangement. When an underwater obstruction is encountered between the cork and hook, the cork/sinker actually increases the snag probability. A seesaw motion is created over the obstruction with the sinker guaranteeing contact of the hook. By pulling the horizontally floating line the natural tendency is for the hook to raise horizontally, which reduces the hanging problem.

Small brim will often strike and carry bait for a distance, but they tend to be less numerous in holes where the old boys stay. You can usually tell size of a brim by his strike and running technique. Whip the line away from him and recast to a new spot if his technique doesn't suit your taste.

Now, on the afternoon when the fly rods and jig poles are sticking out of boats and from beneath shade trees like quills on a hedgehog, and folks are cussing the mayflies and breaking up their jig poles on the copperheads, and all you can hear is how those blasted brim won't bite, you're over by a fallen tree, beneath some willows, just raking in those pound-size toms. You're grinning like a possum in smokehouse because you're using no special bait, and no special secrets—just the simple tactics of presenting a natural bait in as close to a natural manner as possible, *and it's working!!!*

Commission photo by Kesteloo





# BOBCAT

By ED MYERS  
Stuart

Photos by Leonard L. Rue, III

hearing. It is common to all species.

The bobcat is noted for its solitary attitude. Chiefly a night wanderer, his habits are somewhat fixed. However, he will sometimes move during early dawn, especially if he has ranged too far out of his own "territory." A good example of this comes to mind when I recall a deer hunt in Patrick County a few years ago.

I was sitting backed up against a large cliff well before daylight. There was a slick deer run about 30 yards in front of me and beyond that a creek. The only way around the cliff base was by following the run or crossing the creek. Dawn broke and still no deer. I sat listening to the musical trickle of the water. The sun peeped over the ledge behind me. I shifted my legs and braced my rifle. That was when I spotted my competition.

He was a big bobcat. The biggest I have ever seen. And he was sitting not 15 yards to the right of me. Ironically, we were both apparently hunting the same deer crossing: me with my trusty rifle and the bobcat with his fantastic senses. I shudder to think what might have happened if one of us had been lucky enough to bag a deer. But he was an old cat, and probably wise enough to realize the odds. Anyway, he went his way and I went mine. I'll never forget his surprised expression when our eyes met.

Normally, the bobcat can be classed a nocturnal animal. He reminds me of a small cougar and, like that larger cat, stalks his prey before pouncing on it. Favorite killing point is the neck, near the skull's lower portion. The bobcat rarely attacks humans, unless rabid.

All bobcats are savage eaters. Field mice, rabbits and birds make up their principal diet—with young deer, larger doe, and often domestic animals filling in at random. The cats will often kill livestock and chickens. In rural counties "wild dogs" (domestic dogs turned wild) have been blamed for the bobcat's domestic meals.

Noted for its independence and cunning, very rarely is the bobcat thoroughly tamed. When they first see the bobcat, many persons classify them as similar to the common house cat. Actually, they have little in com-

I HEARD my first bobcat when I was 12. A cousin and I were camping along Big Reed Island Creek in Carroll County following the opening day of trout season. It was a warm May night and we had fished hard all day. We had a good fire going and our young bellies were full of fresh rainbows—two brave outdoorsmen tucked away for the night in a pup tent.

Of course the cat was nowhere close when its scream broke the darkness. But on that warm, hollow night it might as well have been in the tent with us. I'm 30 now and I've heard many bobcats since. I've even hunted them. Caught several.

The southern wildcat (*Lynx rufus*) is one of three subspecies found on the North American continent. The other two, *Lynx maculatus* and *Lynx canadensis*, are found along the Pacific Coast and Canada.

The Virginia bobcat is identified commonly by its yellowish-brown coat, sprinkled with deeper brown and black spots along the sides and underbelly. *Lynx maculatus*, which ranges on into Central America via the Gulf States, is even more profusely spotted and deeper in coloration. The Canadian lynx (*canadensis*) is characterized by its long, grayish, unspotted coat.

The Virginia bobcat is by far the more attractive of the three subspecies. Its stout legs and short tail give it a powerful appearance. Heavier than the female, the male usually ranges around 25 pounds at maturity. A long growth of hair jutting above the ears has been found through experiment to be an aid to the cat's



mon. The bobcat's head is thicker and stouter; its tail is bobbed without any sign of taper. There is also the distinctively different weight factor.

The Virginia bobcat breeds from late February through May, its litter usually containing two to four kittens. Dens can be found in various out-of-the-way places. Often hollow trees, caves, swamps and thickets provide a haven. Sometimes two litters are born to the same mates in a 12 month period. Cats normally live from nine to 15 years, seldom over 18. During mating season their calls at night are frightening, especially when the two get upwind of unsuspecting ears.

Bobcat population seems to be on the increase in Virginia, the greatest number in more rural, mountainous counties. There are also plenty of the cats in the Dismal Swamp area of the Old Dominion. Actually a mammal, bobcats until recently were classed with non-game species such as woodchucks and skunks. Now the bobcat is considered a game species. Tighter environmental factors have extended more care and protection to Virginia forestlands, leaving a chance for a more remote livelihood for all species. Increases in deer populations, as well as other game, provide the bobcat with an ample food supply.

Wildcats have value for man. They are an aid to deer and rodent control. Not at all like the run-of-the-mill housecat, some have been domesticated at very early ages. Often "pet" bobcats can literally tear a house apart in the name of playfulness. It's not wise to domesticate any wild animal. Furthermore, Virginia law prohibits it.

Hunting the bobcat has become more popular in Virginia in recent years. Most are taken from the mountains. The bulk of experienced cat hunters will tell you



Good dogs can tree a cat quickly, but with poor ones a hunter is wasting his time hunting cats.

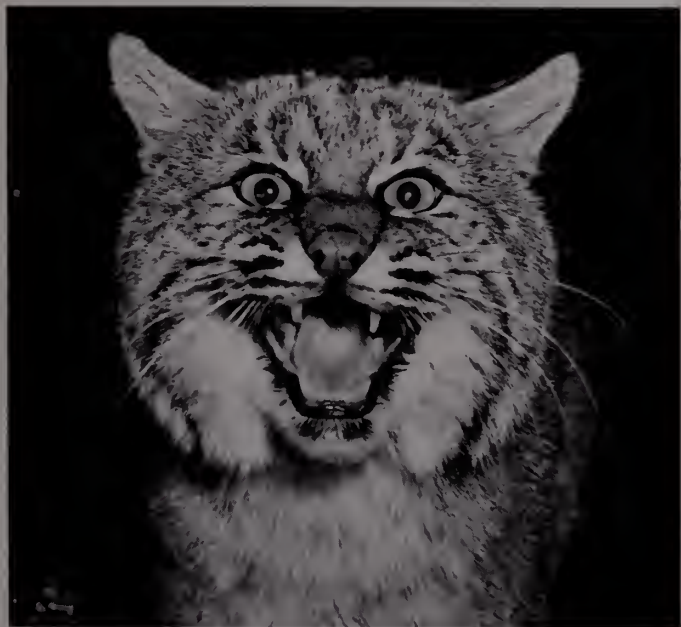
that if you don't have good dogs you're wasting your time looking for this sly creature of the night. With good dogs, a cat is apt to tree more quickly. Usually he will give a good fight and with his speed and sense he can often get a mouthful of your best hound. However, good hounds will carry a cat's trail well ahead of the hunter; in more cases than one, the kill has been made by the time the hunter reaches the hassle.

I've hunted bobcat several times over the past few years. I can't claim to be an expert but I have climbed a few dark hills with a couple of veterans who knew what they were doing. All my hunts have been during early morning because that seems to be the best time. The cat leaves only a slight smell and the dampness of early morning will hold any animal scent longer.

Tracks left by a bobcat look much like the tracks of the common red fox. Usually you can tell the difference by paying close attention to the pattern of travel. The red fox spends a lot of time curiously zig-zagging about smelling under every rock or bush. A bobcat will walk a straight and narrow trail. His footprint is fatter than that of a fox, and his claws don't show as much.

Many people go through their hunting life without the first encounter with a bobcat. Others, like Basil Myers of Martinsville, runs face-to-face with one every time he goes deer hunting. But spying a cat after daylight is rare, based almost solely on chance. Perhaps the Virginia "coon" hunter can tell more tales than anyone about various encounters with bobcats. This is because the coon hunter must hunt by night—at a time the wildcat is very much on the move.

Regardless of who hunts him, old *Lynx rufus* is definitely on the increase in this state. We'll probably be seeing (and no doubt hearing) a lot more of him.



The bobcat is a good fighter when cornered. Bobcats are protected except during the open hunting season.

# Notes From A Seagull's Diary

By WILLIAM WHALEN, *Public Affairs Officer*  
*US Fish & Wildlife Service, Boston, Massachusetts*



**T**HE gull soared above the waters of lower Back Bay, tipping its wings to change direction. Lower and lower it dropped to the water, then settled alongside a group of tightly rafted coots. The gull paddled its way methodically to the coots, which gave way to the much bigger bird. Looking left and right at each coot that shied away, the gull plodded along looking for a victim. A sudden slash of the beak, and a coot met almost instantaneous death. The gull began to feed immediately as the coots reformed their raft and continued on their way to another certain death, avian cholera.

On the shallow islands in the bay, fellow gulls were having a feast of coot that had died the day or days before. The gulls, through their own system of communication, knew where there was a good thing: it was a banquet for them all.

On shore, at the Pocahontas Trojan Waterfowl Management Area, the gulls had probably seen men and boats and airplanes, but they had learned to live with and by man. They had no concern. Until the middle of February 1975, the gulls had been feasting on some of the 18,000 birds, the highest percentage of which by far were dead or dying coots. Occasionally they would take a juicy part of another bird, but mostly coots—enough to go around many times over.

The Waterfowl Management Area, operated by the Virginia Commission of Game and Inland Fisheries, was alive with people, motorboats, a helicopter, and at a nearby landing strip, a crop-dusting plane, its tanks filled with a liquid mixture. On hand were members of the Virginia Game Commission; U.S. Fish and Wildlife Service Refuge personnel from all nearby refuges in Region 5; a Special Agent/Pilot from Region 4; the National Fish and Wildlife Laboratory of Madison,

Wisconsin; Patuxent Wildlife Research Center; Lee-town Fish Disease Laboratory; the Department of Agriculture; and the Southeastern Cooperative Wildlife Disease Study Unit; personnel from the Fish and Wildlife Service from other Divisions that included Washington, Richmond and Blacksburg, Virginia, and Boston—all combining their talents in an assault to destroy and dispose of the presently abundant food supply of the gull, coots that were dying of avian cholera.

It was a warm morning on February 22; the gulls had been around as usual at the first light of dawn, pecking at a morsel of coot left from the night before or going after a dying coot. There was hardly enough wind to ruffle the feathers of the gulls as some of them loafed on the marshes. Overhead flew a helicopter; the gulls paid no attention. It wasn't even close enough to give a second glance. Then it was gone. Next, the sound of motorboats. They had seen plenty of them before and would, when the weather got warmer, follow the boats as fishermen throw fish scraps over the side. The helicopter returned and the gulls, unaccustomed to all those noises at one time, seemed to know that danger was close and stayed away from the coots. A still different sound: a plane sprayed some material out of its wings and there was a great deal of confusion as people began to pick up coots rendered flightless by the commercial detergent spray which penetrated oil on their feathers.

A gull would fly low over the water, spot a coot and start its lunch. No sooner had it settled to feed, than one of those meddlesome boats would come by scaring him off and pick up the coot; the gull would fly over to another spot for some other choice morsel, dead or alive, what difference.

After awhile the noise and the machines and the coots were gone for that day; the gulls looked over the area and finally scrounged in the marshes and islands to find enough to eat.

For several days after that first day, the gulls would attempt to feed on a tight raft of coots, when the noises would come again causing the gulls to settle down to loaf safely away from the man-made racket.

One day it was quiet again, but there were no close rafts of coots to feed on. It was back to the marshes to pick up and turn over some morsel left from days before. The gulls would survive, whether it was from the ocean or from the garbage heap. They would eat anything that wasn't bigger and stronger than they were. They never heard about the meek inheriting the earth.

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# WHERE HAVE ALL THE RABBITS GONE?



By HARRY A. JACOBSON

*Cooperative Wildlife Unit, VPI & SU, Blacksburg*

**I**N several areas of eastern Virginia sportsmen and game officials have been concerned for some time about a declining rabbit population. Because of this concern, the Virginia Commission of Game and Inland Fisheries in a joint effort with the Virginia Cooperative Wildlife Research Unit, Virginia Polytechnic Institute and State University, initiated research on the cottontail rabbit in 1973. Purpose of this effort: to find the cause of declining rabbit populations and to recommend corrective measures.

How serious is the problem? Rabbit kill figures have been recorded at hunter check stations at Fort Pickett and Fort A. P. Hill military reservations in eastern Virginia since 1956. In 1961 a sudden drop in rabbit kill was recorded at both locations. Recovery of rabbit populations has not occurred, and since 1961 hunters have harvested an average of one-third as many rabbits yearly as were harvested prior to that date. At Fort Pickett, the highest number of rabbits harvested occurred in 1959 when hunters checked in 3,474 rabbits. In comparison, hunters checked 178 rabbits at Fort Pickett during the 1974 season. Hunters actually checked in twice as many deer (429) as rabbits at Fort Pickett in 1974! Rabbit harvest figures for A. P. Hill are similar to those of Pickett. At A. P. Hill, the highest number of rabbits harvested occurred in 1960 when hunters checked in 1,562 and the lowest number harvested was in 1972 when 42 rabbits were checked.

Fortunately, because of its important status as a game species, the cottontail has already been the subject of much research in Virginia. Over 16 major research projects have been conducted on the cottontail since 1950. Technical reports from these projects would fill a volume over 2000 pages in length. Because of this previous research, many of the circumstances surrounding the 1961 decline were described. In addition, previous research increased greatly our knowledge about basic biology and management of the cottontail.

Present research is attempting to piece together circumstances surrounding the 1961 decline and to iden-

tify factors adversely affecting rabbit numbers. Changes in food, cover, soils, climate, predator populations, pesticide levels, diseases and parasites are among factors being investigated as possible causes for the decline. Individual rabbits collected in the wild are examined for signs of malnutrition, blood disorders, disease and parasite presence and reproductive status. Many measurements made are of the same types used in human and veterinary medicines. Rabbits are being examined from an area where rabbit populations were known to have declined (Fort Pickett) and from an area where high rabbit populations are known to exist (Radford Army Ammunition Plant in western Virginia). Comparing these two areas should provide information as to which factors might be responsible for low rabbit numbers.

Although research is still in progress, some results have been obtained. Habitat change has been ruled out as a probable cause of the decline. Aerial photos taken of Fort Pickett in 1955 and 1968 showed no significant changes had occurred in major habitat types (croplands, hardwood forests, conifer forests, mixed hardwood-conifer forests, abandoned lands, etc.). Records on predator populations, climate, and pesticide applications have indicated that none of these are probable causes for the decline. Since the above factors are not likely causes, one area of concern is disease.

Tularemia (a highly contagious and fatal bacterial disease for rabbits) was known to be present during the 1961 decline. Evidence that this disease is still present has been discovered in present research. Other diseases and parasites also are being investigated. However, hunters should not be overly concerned with the danger of these diseases to human health. Outbreaks of tularemia (rabbit fever) generally occur during summer months and are past by the time the hunting season arrives. Use of rubber gloves while skinning rabbits or handling the meat is recommended. Thorough cooking renders the disease harmless and makes meat safe for human consumption. These are recommended standard procedures for handling wild game.

Completion of this research is expected by 1976. Results will provide better understanding of factors limiting the cottontail rabbit in Virginia. This knowledge is essential for further research and sound management of the cottontail.

Author weighs a captured cottontail to determine its condition.





## TEACH THEM

# OUTDOOR

By CARL "Spike" KNUTH  
*Audio-Visual Supervisor*

storm, the awesome spectacle of a summer thunderstorm—even the biting fierceness of a snowstorm—and the discomforts of each. We knew also the problems of riding on a sultry summer night when the seemingly tripled bug populations dove at our single headlight. It was often imperative that we breathe with our mouths closed tight, so most drives were taken in relative silence.

However, there were far more pleasurable moments associated with our journeys. For example, it was an excellent way to cool off on a hot, muggy night. I have found few activities that are as exhilarating or inspiring as a motorcycle ride through the countryside in the clear, cool, crisp air of fall—especially at night under a canopy of sparkling stars. Riding double behind my dad, I was able to see so much more than I would have had we traveled by car. I recall vividly how beautiful the swamps, marshes, streams and ponds were to me mainly because I had learned that these areas abounded with wildlife. From age six, I have been especially amazed, entertained by and interested in birds.

We traveled frequently by motorcycle to visit relatives on Okauchee Lake in Waukesha County near Milwaukee. Here I learned about fish and fishing. My dad and I were frequent fishing companions. At age seven I had a bait-casting outfit. When I was nine I received my first split-bamboo fly rod. My dad had watched me struggle for a year with an old cane pole rigged with gut leader material and artificial flies which were crudely tied to the end. A primitive rig at best, it took many fish, including a four pound largemouth. I was to literally wear out three split-bamboo rods in about seven years. By age 13 I had added a spinning outfit to my stable of equipment. The memories collected in these days of my boyhood are firmly entrenched.

Years have passed. Only now when I find myself with the obligation—the responsibility—to open new doors for my own sons, do I fully appreciate what a great blessing my parents gave me.

When we traveled by motorcycle sidecar, it was a common practice for us to stop for a picnic lunch alongside the highway in the grass under a big shady tree. I remember the odors associated with those roadside lunches: the smell of grass, summer flowers, sun-heated leather of the motorcycle and sidecar seats as

I WAS nine or ten as we walked the shaded little trail alongside a chuckling stream in suburban Milwaukee's Whitnall Park. Feeding on tiny insects, a hooded warbler (the only one I've ever seen) escorted us down the path, seemingly oblivious to our presence. Minutes later that day I spotted my first scarlet tanager.

My parents had a talent for pointing out interesting parts of our surroundings. We made a number of nature walks through Whitnall Park, which even back in the late 1940's was more noted for its floral gardens than its hiking trails. Dad also took my brother and me on field trips along the relatively wild and undeveloped Menomonee River, at the edge of Milwaukee. Each trip brought new experiences and sights.

Our family traveled by motorcycle in those days. We knew only too well the penetrating power of a hail-



# APPRECIATION

well as the less tantalizing gasoline and gunk smells from the hot engine. This was prior to the construction of most waysides. Today picnic tables, grills and restrooms combined with natural surroundings provide a park-like atmosphere. There are also numerous small city and county parks as well as state and roadside parks—very often situated along lakes or rivers—which offer opportunities to learn and have fun at the same time.

Before moving to Richmond my family was especially fond of a small city park in the Wisconsin resort town of Green Lake in the east-central part of the state. Close by is a swimming beach on deep, clear Big Green Lake. After swimming we'd go to the park for a cookout, to play ball or throw the frisbee, with the bonus of top bluegill fishing at certain times of the year. When bored, the boys dabbled on the shore adding to their stone and shell collections or utilized the nearby playground.

Picnics afford an opportunity to discipline the family concerning the outdoors—a step towards good sportsmanship and proper outdoor manners. You can teach them about littering; how good the landscape looks



without litter as opposed to areas that are replete with paper, cans and other debris. Show actual examples. Teach them that there is a time and a place to throw a few stones into the water and to especially avoid bothering others who are fishing. This has happened to me while the parents sat back, protesting mildly, and allowing a bad habit to be formed. It is extremely important to give children proper guidance and counseling when young. As they grow older they will do right habitually; at least know what is right. Truly, if you "train up a child in the way he should go . . . when he is old, he will not depart from it."

Spending a week or weekend camping in a woods or at a lakeside cottage is an excellent way to acquaint the youngsters with many phases of the outdoors. Just planning and packing for such a trip can be rewarding and educational. The less you take the better. Show your children how to properly pack food, clothing and equipment. Maybe a little equipment preparation prior to packing is necessary, such as putting on new fishing lines, sharpening knives or oiling the fishing reels. Let them participate in the preparation to help build anticipation. Plan activities; fishing, swimming, hiking, possibly a number of cookouts. Most resort areas have extra programs and activities to spice up your week at a temporary home. Above all, recall some of the happy times your children had during the week. This way the pleasant memories will overshadow the ever-present unsatisfactory times.

Another fine way to teach your children about the outdoors is by a simple hike in the woods. It is amazing how even a short walk will leave a lasting impression on youngsters. Point out some of the common species of birds; at home, show them those species again



in a bird book. It is amazing how quickly they'll be pointing out different species both in the field or in illustrations. When you spot birds, animals or flowers, stop and investigate them; talk about them. Soon the kids will be seeing things you missed: tiny flowers, bird feathers or an exceptionally pretty stone. I can remember when my boys led me to a tiny stream that bubbled through a woodlands. While they poked sticks into the clear, cold moving water, we spotted a few heretofore unseen shiners darting about in a little pool. Everything a child picks up—a tree twig, an old dried leaf, a dandelion going to seed—is studied very closely. Adults have a tendency to overlook simple things that to a child are great mysteries that need solving.

These woodland field trips are opportunities to teach children to be quiet in the outdoors too. Alert them to bird calls and other sounds such as the drumming of a grouse, the hammering of a woodpecker, or the rustling of leaves as a squirrel bounds away to a spot deeper in the woods. A little tact is necessary here since it is a big order to expect youngsters running free in the fresh air to be still. I try to get around the problem by telling them to be quiet as we go into the woods—showing them things, talking quietly with them—and then on the way out, after the wildlife community has already been slightly disturbed by our presence, allow them to run and make a little noise. It's interesting to note that the happy shouts of children don't seem to upset wildlife as much as other disruptions.

It's never too early to educate children about the outdoors: why creatures and plants were created and the interdependency of living things, including man, which is true ecology. Show them how man is the only creature that is out of balance and how he has to overcome his tendency to upset the balance of natural physical laws. With proper, personal, down-to-earth instruction, children can learn of the origins and purposes of all living things. They will learn how to appreciate, use wisely and live in harmony with natural resources. Show them that ecology is more than recycling paper, metal and glass.

You'll be bombarded with questions. Tell it straight. If you don't have an answer, go together to a book that will have it. My boys have "cornered" me on a number of astronomy and physics questions which we had to go to a book to find answers for. Undoubtedly they've forgotten some of those answers; I haven't forgotten many. Be patient, clear and simple with your answers. Books and magazines are invaluable tools in teaching the outdoors.

Remember, too, when going into a marsh or woodland it isn't always necessary to be concerned with the taking of game. Too many hunter-fathers never look at a forest or wetland until hunting season nears. There is a tendency for us to think of the outdoors as something that is supposed to give us a certain consistent



Interest in nature should be kindled at an early age.

return for our efforts and expense. For some, the expected return is considerably higher than for others, with emphasis on the take and its quantity rather than quality. Contrary to popular preservationist thinking, it is possible to be a hunter and naturalist at the same time. I personally was a "pure" birdwatcher for 22 years before taking a shotgun into the field with my binoculars and camera. I had been unbalanced to the other extreme—that of a preservationist. Hunter-fathers should consider sacrificing some time to take their youngsters into the field. The returns for giving of this time may result in the development of the best possible hunting and fishing partner you could want.

Types of outdoor activities are almost unending throughout each season. In spring, fish gather in great numbers to spawn, offering faster and often easier fishing for youngsters. Wild flowers grow profusely, offering new scenes with each passing week as spring turns to summer. Colorful birds are in migration in marshes, woodlands and along hedgerows. In late spring and early summer you might take your family out to pick wild asparagus, raspberries, strawberries and blackberries. It's not only fun but offers a tasty

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Picnics are always fun and a good introduction to the outdoors.





# CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

R. G. MITCHELL NAMED "WARDEN OF THE YEAR." Wythe County Game Warden Robert G. Mitchell was recently chosen Virginia Game Warden of the Year, according to an announcement by Executive Director Chester F. Phelps. In a letter to warden Mitchell Phelps noted, "A number of elements entered into your being selected. You have traditionally performed well in the main body of your law enforcement work and what is equally important, you have done an exceptional job in your educational activities. The fact that you have trained nearly 8,000 of our state's youngsters in hunter safety is standing evidence that you have the Commission's whole program at heart."

AN ANIMAL COMES OFF THE ENDANGERED LIST! The alligator is back! Once annihilated by hide hunters in most of its range, this country's largest reptile has made a comeback and is no longer thought to be threatened with extinction throughout its range. The "gators" are doing so well, in fact, that the Interior Department's U.S. Fish and Wildlife Service is removing the alligator from the endangered species list in some areas of Louisiana, and downgrading it to "threatened" in 7 other southeastern states. The alligator will remain on the endangered list in Oklahoma, Arkansas and North Carolina.

VIRGINIA WATERS BETTER BY 700,000 FISH. Mid-July saw the stocking of about 700,000 fish in seven Virginia lakes. The fish, all striped bass from one to three inches long, were produced in the Game Commission hatchery at Brookneal, Virginia. Using improved methods, the Brookneal facility was able to produce the required number of stripers for stocking plus a considerable surplus. The bulk of the fish will go into 5 lakes: Mead, Smith Mountain, Claytor, Emporia Reservoir and Carvin Cove. The remainder of the fish will be stocked in lakes Gaston and Kerr. These lakes now provide good striped bass fishing for Virginia anglers and the additional stripers are also destined to end up in the sportsmen's creels.

HIGHWAY OR HABITAT - WHO WILL WIN? In its first action exercising the emergency provision of the 1973 Endangered Species Act, the Fish and Wildlife Service issued (June 30) emergency regulations to protect the endangered Mississippi sandhill crane by legally designating its living space as a "critical habitat." Only about 40 of these birds remain and all are located in a small area in Jackson County, Mississippi, which is now due to become home also for a segment of Interstate Highway 10. It will be interesting to see the result of this first test of the newly available conservation law since it would seem obvious that the small area concerned would be hard pressed to accommodate both super highway and almost extinct cranes.

ANOTHER FISH RECORD! There's one thing you can count on these days - Virginia anglers setting new state fish records. Donald Krantz of Roanoke is one of a growing parade of fishermen that will tell you just that. Mr. Krantz is a believer since he tied into a 30 pound, 3 ounce channel cat near the Hardy Bridge on Smith Mountain Reservoir. Krantz was out for big ones, and taking no chances, he fished with a salt water outfit spooled with 50-pound line!

reward. One personal goal I have is to have a simple campfire cookout, using materials right from the forest. Together, my boys and my wife are going to learn the proper way to build a campfire and how to cook over it. We'll probably cook a simple meal of baked beans, fried potatoes and homemade bread with—hopefully—some fresh caught fish. I can already picture my enthusiasm as my boys clear an area and help with the piling of rocks in a circle then collect small hardwood branches. With the coming of autumn, new activities are possible, such as collecting and pressing colorful leaves, gathering hickory nuts or picking wild grapes. If it's convenient and safe, take your youngsters right into the duck blind with you for a few hours. My oldest boy got so excited about it that he drew a picture of us in the blind and entitled it simply, "Dad and I."

Winter brings with it ice-fishing (in some states), hiking in the snow, studying wild animal tracks or watching winter birds. It might even be a good idea to study simple weather principles—how fronts develop: the different types of clouds and what they portend; thundershowers and snow. Write down things you see together for future reference by keeping an outdoor log or take photos for an outdoor activities photo album. It will be an item cherished by you and your family.

All through the year, spend a little time in various outdoor craft projects. Make a willow fishing pole complete with line, hook and cork. Possibly you can work together making a simple bow and arrow rig. If it is feasible, get a BB gun, teach them how to shoot as well as proper gun handling and safety. In my case, I'm hoping to spend some time building a birdhouse and bird feeder.

Appreciation of the outdoors does not come naturally. True sportsmen-naturalists—people that know and appreciate the blessings of our natural resources—are made, not born. Share your own love and knowledge of the outdoors with your family. Teach your growing children to appreciate and respect their natural surroundings. Teach outdoor appreciation.

#### Best Brown Trout Stream

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from the dam downstream approximately five miles to a train trestle. The second is from Bassett Chair Co. down to one-half mile above Stanleytown Bridge, a distance of approximately three miles. The third is from the mouth of Reed's Creek downstream 2½ miles to Koehler. The record trout were taken in the first section, but big browns also have been spotted in the lower portions.

As many fishermen drawn to the area have discovered, the trophy fish aren't pushovers. Jumbo browns have a way of suspiciously eying a lure as if to read the brand name on it. "It drives you completely out of your mind," exclaimed one frustrated fisherman.



**A**N ever-present problem in wildlife research is the availability of a sufficiently large group of animals to study. White-tailed deer research is no exception. This mammal is probably the most important big game species in America and has received more research and attention than any other. Nevertheless, even with this intensive study and management, much remains to be discovered about the physiology and related aspects of the deer. Captive deer research is the best way to examine these factors, and the inability to house and maintain a large number of animals has hampered such experimentation.

V.P.I. & S.U. is very fortunate in having a captive deer pen facility. Virginia Tech is a member of the Cooperative Wildlife Research Unit Program and in such Units, research funds are contributed by four different groups. As a land grant university, V.P.I. is



Use of captive deer allows study of food preferences and intake not obtainable from wild animals without large-scale killing for specimens.

Left: Commission photo by Gillam. Photos above and at bottom of page 15 are by John E. Estep, VPI&SU.



# A DEER IN HAND

By JAMES A. WESSON, III  
*Graduate Student, VPI & SU, Blacksburg*

Commission photo  
by Harrison.

the member which supplies the facilities for the Unit. The other contributors are the Fish and Wildlife Service, the Virginia State Game Commission, and the Wildlife Management Institute. The V.P.I. Wildlife Research Unit is the oldest of its kind and was begun in 1935. Through cooperation of these four groups, many wildlife Units throughout the United States are better able to undertake significant wildlife research. It was with these Unit funds, along with other funds from our game commission and the Division of Forestry and Wildlife at V.P.I. that enough money was pooled to construct the deer pens in 1967-1968. Most of the maintenance bills since that time have been paid by the V.P.I. Cooperative Wildlife Research Unit.

The first deer came to V.P.I. from the Radford Army Ammunition Plant in 1968. Since then, many other deer have been added from this facility. Other deer have been born in the pens, while still others have been contributed from all over the state. Normally, a herd of 35 to 40 deer are in residence for research purposes.

Care of deer is very much the same as that of domestic livestock. They must be fed and watered each day. Food normally consists of a pelleted ration mixed by a local feed company. This ration consists of a mixture of alfalfa meal, corn, soybean meal, molasses, mineral salt and a special vitamin package. Baled hay is given in addition to the pellets. In one week, forty deer will consume from 800 to 1000 pounds of the pelleted ration and 4 to 5 bales of hay. Pens must be kept as clean as possible to maintain tolerable working conditions.

Normal seasonal maintenance of deer must also be considered. In late spring, fawns are born. Often they require special attention and bottle feeding to keep the young deer tame. During the fall, does must be bred to maintain the herd. At this time also, bucks require special precautions due to their aggressiveness in captivity caused by mating behavior. For safety reasons, all antlers must be removed every fall. In addition, various diseases and ailments must be treated throughout the year.

The primary purpose of the deer pen facility is graduate experimental education and faculty research. To date, at least half a dozen master's degree projects and



one doctoral project have been completed wholly or in part at the deer pens. Present graduate research involves such things as the effects of different levels of nutrition on the physiology of reproduction, immobilizing drugs and blood research, antler cycle and hormone level studies, food habits and digestion with fistulated deer, and pollutant effects. Through basic research like these deer-in-captivity studies, valuable information will be procured which will allow better management of this important game species for the sportsman.

Blood is drawn from the jugular vein for analysis later.







Stanley Clark displays 12 lb. 9 oz. brown trout that started records breaking.

**S**MITH River, dashing cold and clear out of Philpott Dam near Bassett, long has been considered one of the finest trout streams in Virginia. Now some fishermen are ballyhooing it as the best brown trout stream in the country. That's a stupendous description for any water, but what happened at Smith River beginning late July 1974 has given the stream a pre-eminence difficult to discount. In three weeks, the state's brown trout record was broken three times by Smith River catches. At this writing, it stands at 14 pounds, 6 ounces. Some fishermen who know the river well are chanting, "You ain't seen nothing yet!" They believe the tree shrouded water holds browns in the 18 to 20 pound class. In fact, some say they've hooked and lost such monsters. It's now just a matter of time before another record is established, they predict.

It all began on July 19 when Stanley Clark, a Martinsville contractor, decided to fish the river immediately below Philpott Dam. Clark is one of the most active and successful outdoorsmen in the state, specializing in float duck hunting, striped bass fishing, spring gobbler hunting and Philpott Reservoir trout fishing. For a time in 1971 he held the Virginia record for coho salmon, after landing a 7½-pounder in Philpott.

Clark, like other anglers in the area, had heard rumors about jumbo brown trout lurking in Smith River. Tom Powell, who operates Powell's sporting goods in Martinsville, had told of such spottings. Some of the fishermen who hang around his store only laughed, saying he'd been seeing carp, not brown trout. Clark didn't laugh. One afternoon he dug several extra large spoons and spinners out of his tackle box and went to the river with his husky 6500 Ambassador casting reel wound with 20 pound line. The outfit would be more likely seen in the hands of a striper fisherman than a trout angler, but as Clark explained it: "I went to catch a big brown." And that he did!

Fishing a large pool just below the dam, he made several casts with a spoon. No luck. Then he tied on an oversized, one-ounce Shyster spinner and threw it. The

# Best Brown Trout Stream in the County

By BILL COCHRAN  
*Roanoke*

white lure speckled with black spots had cut the water only a short distance when Clark's line went tight, as if he'd snagged the bottom. Then he felt the moving weight of a huge fish. Even on heavy tackle, the thick-bodied, 28-inch brown that he'd hooked battled gallantly. "I had a time with him," said Clark. "I didn't have a net. When I got him to the bank, I gathered him up in my arms and ran away from the water. I'd taken only a few steps when the hook fell out." The rich-colored, well proportioned fish weighed a whopping 12 pounds, 9 ounces. It exceeded by a full pound the old record taken November 1971 by Nelson Creasy of Hollins, fishing Bath County's Spring Run below the state's Coursey Spring Fish Cultural Station.

A week later, July 27, Leon Vencill wrestled a 13 pound, 11 ounce record from the same pool. Then, just 12 days after that, August 8, Al Teachout of Greensboro, N.C., caught the current 14 pound, 6 ounce record approximately three-fourths mile below Philpott Dam.

Tom Powell is one of the fishermen who believes Smith River holds even larger fish. He says he came close to catching one estimated to weigh 18 pounds. Using a Prowler plug, he teased such a fish up to his lure a couple of times one evening. Things began to look increasingly promising for a strike. Then he made still another cast and began working his lure when his new wife came up and asked him to tie a lure on for her. Without taking his plug out of the water, Powell put down his rod for a moment to assist his wife, and it was then the big trout took his lure. By the time he grabbed his rod, the brown had ejected the offering. "I felt like someone had beaten me with a big stick," said the dejected Powell. As for his wife, she's since quickly learned how to tie on her own lures!

How did Powell estimate the trout to be 18 pounds? Well, the big fish had been spotted swimming around in the same pool with Vencill's 13 pound, 11 ounce trophy. Powell said it was head and shoulders larger than that trout. Vencill, from Martinsville, landed his fish on a Prowler plug. Teachout got his on a Racket Shad. Both of these lures resemble a baitfish, such as a shad, in looks and action, and this is an important point.

When power is generated at Philpott Dam, a U. S.

VIRGINIA WILDLIFE



Army Corps of Engineers development, it lures baitfish, probably mostly alewives, from Philpott Reservoir and spins them about in the river providing a welcomed and important food supply for trout. Big browns often can be viewed actively feeding on the baitfish. Best lures have been those that resemble baitfish. Some fishermen use baitfish themselves. When Teachout landed the current record, he was casting his Racket Shad upstream and letting it float downward on the surface dry-fly style. The big brown sped up and grabbed it with a thundering splash. It finally yielded to the pressure of eight pound line after what Teachout described as a 45 minute battle. The trout measured 27  $\frac{3}{4}$  inches long.

Although trophy trout have been caught from Smith River for a number of years, 1974 is remembered as an exceptional season because the browns apparently have waxed fat on an unusually high number of baitfish in the stream. Biological studies have not been done to ascertain it, but doubtlessly the baitfish population has increased in Philpott Reservoir, sending increased numbers of these forage fish down into Smith River. R. W. Crawford, state game warden in Henry County, verifies seeing larger numbers of baitfish in the river than ever before.

Anglers like Teachout and his fishing partner, Harmon Harms of Collinsville, who actively have fished the stream for several years, credit increasing size of the trout to abundance of baitfish. They report cutting open one five-pounder and counting 58 forage fish inside it. In earlier years, such a fish would have contained mostly insects and crawfish, they say. Teachout and Harms reveal that together they annually land from Smith River 30 to 50 brown trout weighing in excess of three pounds apiece. They've both enjoyed nationwide trout fishing experience but consider this river the best of any they've fished. "I've fished the Madison and in Alaska and Canada," explains Harms. "Right now, I'll put this stream up against any of them." Teachout agrees. He says he's fished for browns in

Harmon Harms works lure above waterfalls on Smith River.



Shad-like lures such as this Racket Shad are often used by successful fishermen like Al Teachout, shown above holding record brown trout catch.



California and Michigan, as well as other noted waters, including the famed Madison in the Yellowstone National Park. "Smith River below Philpott Dam is undoubtedly the best trout stream in the U.S.," he says. This isn't to say it is easy to fish. The river has a dual nature. When generators are silent, the stream is low, clear and placid. When they are operating, it runs high, swift and dangerous to those who do not respect its power. Many fishermen try it one or two times, then give up.

Some anglers work the river during non-generating periods, sending flies or baits to the pools and riffles. Teachout and Harms prefer to fish when the hydroelectric generation sends gushes of water from the dam, swelling the river below. Along with increased water comes baitfish and other natural foods which start the trout on a feeding spree. Generation normally takes place on weekday afternoons.

Like most tailrace streams, Smith River is served well by Philpott Dam. Even in hot, dry weather, releases from the dam keep the stream level up and water temperature down. In addition, the upstream reservoir provides a rich food supply for stream trout. The river annually receives heavy stockings of fish. Biological studies also reveal some natural reproduction, and possibly some trout come through the dam from the reservoir. No one knows for certain the origin of the recent record catches. Even if they came from a stocking of relatively large brood trout, which is highly possible, they had remained in the river for a lengthy span of time, taking on the rich coloration and handsome configuration of resident fish.

According to Warden Crawford, three sections of the river are stocked and open to public fishing. The first is

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# THE RACING PIGEON

By BILL WEEKES  
*Spartanburg, S. C.*

Photo by L. L. Rue, III

**H**OME is where the racing pigeon's heart is. The better he's treated at home, the faster he'll want to return to it—all other things being equal.

Such is the foundation on which some 20,000 American pigeon fanciers base the training of these birds in one of the least-known-about sports in this country—pigeon racing.

Clubs in Lynchburg, Danville and Roanoke helped Martinsville-Henry County form a pigeon racing club this year, and this fall that club's five members were among the Old Dominion's newest homer enthusiasts.

So who wants pigeons? Aren't they those nasty old birds that dirty up streets and roofs of people's houses?

"The racing pigeon is entirely different from the common pigeon you see in town," stressed Lewis Blankenship of Henry County's Figsboro Community. "The racing pigeon is hard and muscular while the common pigeon is soft and fluffy. And my birds don't ever get on anyone else's property. They are trained and disciplined to come to my loft only."

It was his wife's uncle, Jerry Kostal of Lynchburg, who got Lewis interested in pigeon racing in the first place—in 1969. Through inexperience, Lewis lost five of seven late hatchers, but today trains 22 from his loft and knows his own flock so well he can easily spot a stranger should one become mingled in it.

"We'd go to Lynchburg often and the more I saw of Jerry's birds, the more interested I got in them," Lewis recounted. "I wondered how the birds ever got back and Jerry asked if I'd like to get some. I said I would, and so I got started.

After losing five, Lewis learned that a pigeon fancier has to get his new birds "settled" in their home area before letting them fly.

"You got to get them used to your place. If you get them

five to seven weeks old, keep them in the loft a couple weeks before letting them fly around the house. You do this every day for another three weeks," Blankenship said.

"The birds have the built-in ability to navigate, but you have to build up their confidence. Take them out for short distances. If a bird is six days late at 35 miles, then don't let it outside for a couple days and then start him flying back at shorter distances."

How these birds are able to find their way back over strange land is a mystery man has been trying to explain for centuries. But one thing is sure—love helps the instinct along.

"You've got to love, not like, but love these little birds, and they will learn to trust you and this will make them want to come back sooner. They learn to love their home and master. And if they leave a mate behind, they will try to return that much sooner. However, if a bird's afraid of his master, he may sit on top of the loft where he has to be timed."

Lewis started training his birds last July 26, feeding them by hand and letting them fly back to his house each day a little bit further from home each day.

"After the birds have trained 50 miles, they are able to jump to 100 miles, then 150 and 200," Lewis said.

Thus birds work up confidence and conditioning at the same time. Since he started this training, Lewis has lost only one bird. Ironically, the lost bird was the blue check that won the first race. It didn't come back with the flock from Statesville. Lewis has had a couple birds come back late—one six days late from 25 miles out and another a day late from 55 miles away.

"However, just because a bird's late doesn't necessarily mean it's a bad bird," Blankenship pointed out. "The bird may simply not have felt well."

Blankenship keeps a record of his birds. He is able to do so because each and every one has its own little number,

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analogous to a human being's fingerprint. The bird is banded when it is only five or six days old. The information on each band tells the federation under which the racing club is organized ("AU" for American Racing Pigeon Union Incorporated), the year the bird was born, its individual number and club. As an example, Lewis received these late birds as babies from the Roanoke Racing Club. So their band numbers were as follows: AU 70 RRC 336 and AU 70 RRC 341. Were these birds somehow ever to get confused and arrive at a strange loft, the owner would take the band, look up the number on a national list and obtain the club to which the bird belonged and the name and address of its secretary.

By using these numbers, Blankenship is able to keep a calendar and chart of his birds which are guides in evaluating the pigeons' performances in training and in races. The racing times are figured in yards per minute.

The birds' times, however, are recorded in singular fashion. First, everyone's pigeons are released at the same time. When one arrives through the trap on the loft, a marker is taken off its foot and deposited in a slot in a rectangular box in which is enclosed a clock. After the marker is put into the slot, the clock is "bumped"; that is, a handle on top is turned which stamps on a rotating paper inside and starts the clock. As each bird traps, the markers are deposited and the clock is bumped again, later to disclose the time interval between bumps.

When the race is over, the racing club members meet, the clocks are stopped together, and the arrival times of the birds are figured by subtracting the time the clocks have been running from the time the birds were released and the clocks stopped. Lewis' birds won the first race, averaging 1,089 yards per minute, while his winning bird in the second race traveled an average of 1,071 yards a minute against a five-mile-per-hour wind. In the third race, Lewis' dark check cock won at 999 yards per minute.

"The men in the Danville Racing Club, who have been racing for years, said they thought my birds' times—considering it's a new club—were good," Lewis said.

The Martinsville-Henry County Pigeon Racing Club got started through the help of other clubs in southwestern Virginia—such as those in Roanoke, Lynchburg and Danville.

"After I lost those first five, I'd get two or three here and there and I told Jerry I'd like to form a club in the Martinsville area. He invited me to a combined meeting of the Lynchburg and Danville clubs. I met a lot of fanciers and filled out forms and got the five required members to pay \$2 dues to the American Racing Pigeon Union. We had a couple meetings after that to elect officers. Various clubs helped us get pigeons and that's how we got started."

"The clubs have been real good to us. Peyton Shanner of Roanoke has given us more birds than anyone, and we run our racing schedule with the two Danville clubs and they ship our birds with theirs and release them 30 minutes before they release their own."

Only "young" birds—birds hatched in the same year in which they are racing—race in the fall (August to November) while "old birds," or yearlings, race in the spring (March to June).

"There are a lot of theories on racing, but I train my birds to fly back in the direction they will have to fly back in a race—usually northeast. So when I take my birds

on exercises I'll go to Ridgeway or Madison or Eden."

Sometimes Blankenship's birds bring home "company."

"My wife Mary Ann finds it hard to believe I can tell when there's a strange bird flying with my flock, but I can," Lewis said.

Once a common pigeon returned with Lewis' racers and Lewis tried in vain to shoo it off his land, but finally had to shoot the persistent bird (waiting until his wife was in a remote part of the house unable to be a witness). Another bird came in that belonged to a member of the Lynchburg club.

Yet another occasion, a bird that one of Jerry Kostal's relatives in Chicago had shipped to Lewis for breeding, somehow escaped the breeding loft, headed ostensibly back to northern Illinois. Three months later, the bird returned to Lewis's loft with his returning flock.

"We sure would like to know what happened to that bird while it was gone," Lewis said. "It was in a pitiable shape, its feathers all ruffled and run down."

When Lewis doesn't take his birds out on the road, he lets them out of the loft to fly around the house for exercise. Then after he whistles them in and feeds them, they are usually ready to roost. The pigeons stay in their own little pigeon hole and will run out any interloper. This territorial instinct is also maintained in the breeding loft where females fight any other bird that tries to "muscle in" to her own little corner or nook.

A hen lays eggs in clutches of two only. She will lay an egg nine days after conception. Both she and the cock will take turns sitting on the eggs and later in feeding the chicks, which are kicked out on their own at age six or seven weeks.

Both Lewis' daughters own a racing pigeon. His six-year-old girl, Malissa Gay, owns a chocolate (No. 1340) while Vicki Lyn, 12, owns a blue check (No. 1339). Sometimes it worries Malissa when her bird is flying late. But Lewis gets a kick out of coming into the house and saying to her: "Guess whose bird just came in?" And Malissa's eyes will light up and she'll be happy again.

Both Lewis and Roger Hall, club secretary-treasurer, see in pigeon racing a healthy outlet for young people.

"I'm trying to get my little boy interested," said Roger. "Although he's only two, he helps me carry the bucket of feed. I hope he'll become interested in it, so that it will give him something to do when he's older."

George Cox, of Martinsville, club race secretary, got his dozen birds for a hobby for his two sons and daughter, who feed, water and exercise their birds and helped Cox build their small pigeon loft in their back yard.

"One thing about this sport is you yourself don't have to be an athlete," Lewis explained. "I used to play in all the sports in Henry County until I got an allergy three years ago. That pretty well cut down my physical activity. I guess that's how I got interested. It gave me a hobby, an outlet, and it not only has been good for me, but I know a lot of men are participating in this sport for their children, who have grown to love these little birds."

Only in the last 50 years has this sport become popular in our country. It originated, it is thought, in Holland a century and a half ago, spreading to Belgium where pigeon racing is now a national sport.

# WINTERGREEN

By SUSANNAH E. FELDMAN  
*Alexandria*



**W**HEN July showers begin, tread lightly in the pine forests and seek the sun-shy native herb, wintergreen. This low-growing evergreen, *Gaultheria procumbens*, is of the heath family and grows midst fallen pine needles. It thrives in the shade of the forest evergreens. The hard stems of wintergreen spread below ground surface and send up clusters of stemlets crowned with varnished oval-shaped dark green leaves. Undersides of the leaves are a lighter green in color. Young tender leaves of this attractive vine-like ground cover are chartreuse, blushed with red, and are edible. Stemlets grow to from three to six inches in height. All leaves are smooth but have minute thorns growing out from the margins; when these leaves are crushed, they exude a pleasant peppermint aroma. Small clusters of white flowers, urn-shaped, grow from the axils of the leaves. Fragile flowers are of waxy texture, have five backward turning points at the mouth, and droop

over as if to empty their nectar. Each has two small bracts and a five-pointed calyx. The calyx embraces the ovary and forms sphere-shaped fruit that ripens to a crimson red and becomes the checkerberry of the woodland. Small blooms appear in late June to August followed by the berries. They are dry acid-sweet to the taste, some as large as one half inch in diameter. Berries are hardy, tenacious, and last into the following season retaining their true acid flavor. They are aromatic and decorative.

This small plant grows from Newfoundland to Manitoba, and through the milder latitudes as far south as Georgia. For many years it was the only source of wintergreen oil, but when chemists in later years produced methyl salicylate, wintergreen was passed over and lost its popularity. Pharmaceutical authorities agreed that the natural oil of wintergreen and the chemical substitute were identical.

During the American Revolution leaves of wintergreen were one of many substitutes for imported British tea. The fresh leaves, crushed and immersed in boiling water, make a peculiarly palatable beverage; also, an essence similar to bitters is made from wintergreen berries and brandy. Early settlers were familiar with this little herb; they were aware of its medicinal values and used the oil as a rub for rheumatic joints, lumbago and similar ailments. It was sometimes called 'Rachel's Vase,' because of its urn-shaped flowers.

History and legend records it to have grown in abundance in the pine forests of New Jersey; huge baskets of small bouquets were brought to the Jersey Market of Philadelphia in November and December and sold for one cent each. Deer and partridge indulged themselves on the berry in late fall; it was thought that the rare delicate flavor of venison came from the spicy berries of this shrubby plant. Indians of Michigan and Wisconsin ate the berries of *Gaultheria* and called them deerberries.

In the American scene of the early 1900's oil of wintergreen was well-known because it was an ingredient in "Panacea of Swain," a quack medicine. The oil has also been used in the preparation of perfumes and soaps. Over 2,000 lbs. of wintergreen oil was produced in the United States in 1915.

Down through the centuries nature has provided man with food and medicine by her generous sprinkling of wild herbs. Many a pioneer's miseries have been eased and many a wound healed by remedies made from small plants of fields and woodlands.



# MOUNTAIN WATERHOLES



The mixture of fertilizer and dynamite blows a big hole with minimum bang.



The finished waterhole.

By DENNIS MARTIN  
*Game Biologist*

THE birds had quit singing. Smoke was fingering from the many small fissures along the walls, and soil was falling from the trees. We reasoned the singing had stopped because we had just created this hole in the ground with explosives which were not sophisticated enough to be silent.

We were looking at the end product of a wildlife management tool now being used in Northern Virginia by Game Commission biologists. This particular waterhole happened to be the largest—14 feet wide and 16 feet deep and conical in shape. An average hole with the same charge would be about 12 feet wide and 5½ feet deep with a fairly flat bottom.

A great deal of preparation had gone into creating this system of waterhole construction. The literature had been searched, stone quarry representatives were contacted and local explosive suppliers were hounded about materials, safety procedures, and needed equipment. West Virginia wildlife biologists permitted us to observe their blasting program. Proper state permits were obtained and storage facilities were located to purchase and store explosive agents. Manufacture, sale, and storage of explosives is rigidly controlled by governmental agencies.

After finally obtaining the material, permits, and proper training, the decision was made to make preliminary blasting tests. The system was considered quite safe, and the cost, relative to conventional methods of waterhole construction, was very low.

Conventional methods of watering hole construction are both expensive and time consuming. Operating a

small crawler would cost about \$10.00 per hour; a small bulldozer, about \$18.00 per hour. Both would cost considerably more to rent. It would also require at least one day to transport the machinery to the site and complete construction of one waterhole. Total cost of constructing 3 waterholes by this method could reach \$500 or more when considering all costs, and three days or more would be required to construct them. Furthermore, sites would have to be chosen that were reasonably close to an access road, thus prohibiting the creating of watering sites in many areas needing them.

By comparison, blasted waterholes would be cheaper, faster, and considerably more versatile. The same three waterholes could be completed in one day for less than \$150, including labor and materials. The distance from access roads that sites could be chosen would be increased substantially.

Water has been considered a limiting factor in total numbers and distribution of many game and non-game species. Some non-game species of birds and mammals do not require free water. Squirrels obtain most of their water from their food, although some free water is available in rain and dew on vegetation. Free water has been found to be very important to wild turkeys, deer, grouse, doves, and perhaps to a lesser extent for raccoons, foxes, rabbits, and other species of wildlife.

By providing water in areas heretofore lacking it, and providing it during those times of the year when it is most scarce, a better distribution or increase in numbers of many game species could be realized. Of course, water is not the only limiting factor. Disease, weather, predation and limited food supplies control population numbers and still need to be monitored.

Virginia is not the first state to use this tool. Biologists of the U.S. Forest Service and the Michigan Conservation Department were among the first to use this ammonium nitrate-fuel oil (AN/FO) mixture for wildlife habitat improvement. Since that time in 1963, Wisconsin, Kentucky, and many other states have adopted this method of pothole blasting for waterfowl management. Other states, including West Virginia, have used it to establish waterholes for upland game.

A common fertilizer, ammonium nitrate (AN) when mixed with fuel oil (FO) becomes a violent explosive. It has many advantages over alternate methods of creating waterholes and it is considerably cheaper than using heavy equipment or dynamite (costs would be about 20% to 30% of either). It is possible to create waterholes in areas inaccessible to heavy machinery. AN/FO is relatively safer to handle than conventional blasting agents when properly supervised by those experienced in handling explosives. But as with all explosives, even fire-arms, AN/FO should be considered and employed only in the presence of a qualified super-

visor.

Fertilizer and fuel oil is pre-mixed in proper proportions before reaching the blasting site. Special dynamite used to detonate the AN/FO is ignited electronically, creating high pressure and heat which vaporizes and ignites the AN/FO. The primary working agent is the fuel oil; fertilizer provides oxygen for it to burn. The relatively slower burning AN/FO, when compared with dynamite alone, is considerably less objectionable to the ears; and much less ground vibration is experienced.

*It should be stressed again that many techniques and safety procedures are not given here. The above description is to be considered most inadequate in duplicating this method of blasting. General terms and phrases have been used to discourage those that would try blasting without qualified supervision and experience.*

Only two of over 40 holes have failed to hold water. The first hole detonated was a system and procedure check, and little thought was given toward obtaining water. The second apparently broke through a hardpan allowing water to escape through the bottom.

Sites have been chosen with great care. Wet sites have been the most successful. If water which is not compressible fills the space between the soil particles, the energy of the explosive agent more efficiently moves the soil and rocks. If this space between the soil particles is filled with compressible air, it acts as a cushion and decreases efficiency. Therefore, small springs and seeps are considered prime candidates for waterholes, especially if they are associated with saddles or shelves which are quite often near major wildlife trails. Shaded sites retard evaporation, although this also retards the vegetation that could provide cover from predators. The largest hole described earlier was on a wooded shelf in rare deep clay soils, near a small clearcut in Alleghany County. Most of the blasting is done in late winter and early spring, primarily to take advantage of moist soils.

Initially the walls of a blasted waterhole are steep, but loosely packed sides slough off in a few months leaving a small natural looking pond. Immediate seeding of exposed soils with desirable wildlife plants makes an additional attraction to the area by providing food and cover.

The AN/FO blasting technique broadens the scope of one of the wildlife management tools used in Virginia to improve quantity and quality of the hunting experience. With this increased efficiency, and by carefully planning and coordinating its use with other management practices such as timber harvesting practices, clearing and road maintenance, plantings, fire control or use, and law enforcement, we feel the sportsman's dollar is more wisely spent. Plans are being made to use the system in other areas of the state, so if your turkey blind is a little damp next year perhaps it is because your local biologist was trying to increase your chances of getting a bird.





Edited by MEL WHITE



Kay S. Collie took this unique photograph while she was driving with her husband near Boston, Virginia.

#### Larry Mohn Heads Stream Classification Project

The Fish Division of the Virginia Game Commission has announced that Larry Mohn will head the division's trout stream classification project. Mohn is a graduate of Pennsylvania State University where he received his Bachelor of Science degree and Virginia Polytechnic Institute from which he received a Masters Degree in 1972. Originally from Schwenksville, Pennsylvania, Mohn has been involved in fisheries work in Pennsylvania and Oregon before joining the Virginia Game Commission in July of this year.

Mohn will head up the project and is currently directing two teams of researchers. One crew is involved with physical and chemical aspects of the various trout streams and the other is investigating quantitative estimates of trout populations and bottom fauna.

The project Larry Mohn is directing is basically a classification of the state's trout streams for management purposes. Though not all of the water the classification crews will investigate can be considered trout water, several thousand streams will have to be surveyed in order to discover which will support trout. Primarily, the work will

involve cataloging native trout streams and those which have potential for the Commission's put-and-take trout stocking program.

The stream classification project will also serve to protect and preserve the best streams, many of which might otherwise be lost. Good trout water is often lost due to physical disturbances such as stream channelization and road construction or sedimentation in the form of runoff from croplands and strip mining activity. It is felt that these losses can be considerably reduced or eliminated entirely by working with other agencies responsible. First, however, the streams need to be classified and a value placed upon them.

#### How to Start a Swamp

The Great Dismal Swamp, straddling the Virginia-North Carolina border, began forming about 9,000 years ago when subterranean water under artesian pressure started leaking to the surface, hydrologists for the U.S. Geological Survey, Department of the Interior, have concluded in a new theory.

Under their hypothesis, the upward flow of water plus abundant rainfall and poor surface drainage led to formation of peat (partially decayed plant matter) on the floor of what is now the swamp, one of the few remaining large wet wilderness areas in the eastern United States. The peat further inhibited drainage, which in turn speeded the accumulation of peat in a progressive cycle that is still going on.

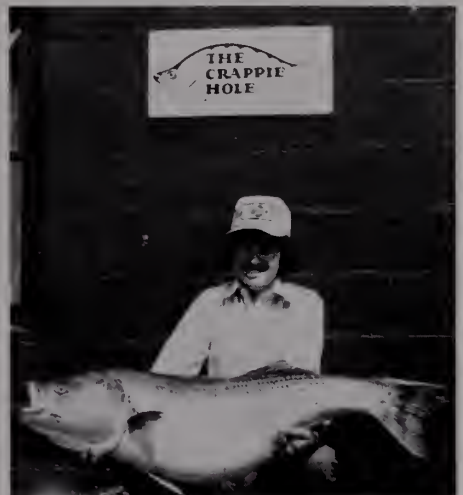
The new theory is contained in a USGS technical report, which is a significant part of an overall report to be issued shortly by the Department of the Interior in response to a Congressional request to determine the feasibility of protecting and preserving the swamp and the Dismal Swamp Canal. Copies are available free upon request from the USGS office at 200 W. Grace St., Richmond, Va. 23220.

## Book Review

THE BOOK OF OWLS, by Lewis Wayne Walker (Alfred A. Knopf, Inc., 201 E. 15th St., New York 10022; \$12.50).

This is a delightfully sneaky book. It will teach you a lot about owls before you realize it because of the pleasing, popular form in which the subject matter is presented. The reader does not bog down in the plethora of scientific data used. Therefore, THE BOOK OF OWLS is a rare and valuable book.

For each kind of owl the book provides the essential details of nesting, movements, food habits, etc., within the context of interesting personal experiences of the author. There are nearly 100 superb photographs, drawn from the author's collection and from the work of other owl specialists, that make it easy to identify owls in the field. Walker's deep familiarity with the subject and his feeling for it make a first-rate handbook and picture book something a little more elegant.



NOW THAT'S A FISH! The current state record striped bass is held by Paul J. Gorden, Jr., who caught the 39 pound, 8 ounce rock in the Dan River last April 26th.



## Know your TECHNICIANS

Text and Photo by F. N. SATTERLEE  
*Information Officer*

CARL P. RAMSEY  
*Manager, King & Queen Fish Cultural Station*

CARL P. Ramsey's father was a Nelson County farmer who also worked for a lumber company and it was in this atmosphere of the outdoors, animals and things wild that Carl was born and raised. From early childhood, when farm chores permitted, Carl loved to be around water, especially trout water, and his favorite stream to this day is the South Fork of the beautiful Tye River.

As a child he became interested in fish and the operation of fish hatcheries, especially since his uncle, W. G. Seaman, was manager of the Commission's hatchery located near the family farm at Montebello, Virginia. Frequent visits there heightened this interest, and in a casual conversation in 1934 with his cousin Loven W. Seaman (currently manager of the Montebello facility) Carl indicated that he would like to work for the Commission. As a result of that conversation Carl received a telegram from G. W. Buller, who at that time was Superintendent of Fish Propagation for the Game Commission. In the telegram, Carl was instructed to report to the Commission's hatchery at Front Royal immediately. He departed Nelson County that same day.

His first day of employment was one he will never forget. It was October 1, 1934, and he began by working 10 hours removing fish from the ponds in preparation for shipment. After he loaded the truck, which had been assigned to him, with 76 fish buckets filled with smallmouth bass, he departed for Radford (driving all night), arriving there at 8 a.m. to rendezvous with the local warden. The two of them proceeded to distribute the smallmouth. Completing the task about noon, Carl drove to Lexington and went to bed—finally! For this he was paid the magnificent sum of \$2.00.

For the next nine years Carl worked summers at Front Royal, winters in the Back Bay area where he



A smiling Ramsey is seen near one of the numerous fish ponds located on the Game Commission's King & Queen Fish Cultural Station.

was responsible for purchasing adult fish for stocking purposes. This practice was discontinued when the Fish Cultural Station at Stevensville became operational.

In 1943 he was transferred to the King and Queen location at Stevensville to replace the manager who was called into the service in connection with World War II. He has remained as manager since that time.

Looking back at the nearly 41 years that he has been with the Game Commission, Carl thinks that the biggest change he has seen is in the feeding process in fish culture. Formerly, growing fish were artificially fed; now natural food in the water is stimulated by fertilization, and the product that is shipped from the facility is much younger than had been the case in earlier years. Another significant advance in fish culture over the years has been the development of tank trucks which replaced the unwieldy and awkward fish bucket method of shipping fish which played such a memorable part in his initiation to the Game Commission on that day back in 1934.

Carl is married to the former Elizabeth Coverstone from Strasburg who, by the way, is Postmaster at Stevensville. The Ramseys make their home on a lovely five-acre spot high atop the banks of the Mattaponi River.

VIRGINIA WILDLIFE





Edited by ANN PILCHER

### New Class Competition Added to Championship Races



Va. Dept. of Highways photo by Ken Soper

Governor Godwin approves the "Governor's Trophy," which was donated by Delegate Raymond R. Guest (left). Edgar Ambrose, business manager for the canoe races, and Joe Swiger, races chairman and originator, flank the Governor.



Lining up canoes for the start of the Governor's Trophy Race.

### Resources Institute for Youth

About 47 high school students from Virginia and six other states attended the eighth annual Forestry and Wildland Resources Institute held June 15-20 on the Virginia Tech campus in Blacksburg. As an incentive to participate, scholarships covering full or partial tuition, room, and board were offered to twenty-one 15-18 year old students interested in careers in renewable natural resources. Scholarship donors included seven forest products companies. The program, sponsored by Tech's Division of Forestry and Wild-

life Resources, and by the Extension Division, was directed by William A. McElfresh, Cheatham Hall, VPI&SU, Blacksburg 24061, from whom scholarship and application forms were available.

### School in the Park

The Winter 1974-75 Johnny Horizon News-gram published by the Johnny Horizon Program office, U. S. Department of the Interior, Washington D. C. 20240, pictured some of the 102 6th grade students of Belvedere School in Fairfax County during a 3-day campout in Prince William Forest Park with teachers and parent-counselors. The park became an outdoor environmental classroom as the youngsters studied pond ecology, plant and animal identification, and other subjects to deepen their environmental awareness and perception. The piece pictured a parent-counselor testing the lake's water, and the verdict: "clear and unpolluted."

### Sports Equipment For Food Patch Winners

All 36 Fauquier Co. student participants in the food patch planting contest sponsored by the Fairfax Wildlife Club are receiving a year's subscription to *Virginia Wildlife*. Top prizes included an autoloading shotgun, a 22 cal. autoloading rifle with scope, and a first-class fishing rod and reel.

The Ninth Annual Virginia Championship Canoe Races, held April 26-27 on the South Fork of the Shenandoah River near Front Royal, included a new award. The Governor's Trophy, added in 1975 to encourage the healthy activity of canoeing and to recognize a youth group for their proficiency in this sport, was won by Boy Scout Troop 72 from Abington, Pennsylvania. The paddlers racing in this special class, called "Dusters," gathered points for their team in the 13½ mile race over the historic Shenandoah. Twenty-eight boys and girls, 15 and under, competed in pairs in open canoes. Game Commission Chairman W. H. West, of Millwood, presented the trophy, which will be on permanent display at the Front Royal-Warren County Chamber of Commerce office.

The VCCR is a project of the Front Royal Jaycees in cooperation with the Virginia Commission of Game and Inland Fisheries. It has become the largest race of its kind in the United States. Six hundred ninety-one boats raced during the 1975 weekend.



Also geared to youth, the Turtle Race, for paddlers in craft made by the contestants, drew a record 22 "boats."





Edited by JIM KERRICK

### For Safer Boating . . . Make Swimming A First!

Of the millions of people who go afloat each year, those who have the confidence and personal-lifesaving talent which the ability to swim well provides enjoy boating the most, and without care and concern. Be certain you are ready for boating before going aboard.

—Know how to swim, so you'll not be a 'sure goner' if you fall overboard.

—Learn how to survive when you unexpectedly find yourself 'in the drink.'

—Acquire basic personal lifesaving skills so you cannot only save yourself, but also be of assistance to your friends who might suffer the same misfortune.

—Learn to 'stay with the boat' in the case of capsizings and swampings.

—Make your clothing serve as survival gear by knowing how to use it for emergency flotation.

If you are not now prepared by being a good swimmer, take the necessary steps to qualify as a good swimmer by taking advantage of the instructional opportunities afforded by nationwide facilities of such organizations as the YMCA, Red Cross, and Scouts.

There is no need to become a boating fatality 'statistic.' Going boating without proper equipment isn't just foolish, it's also against the law. When boating on Virginia waters, there must be a lifesaving device for everyone aboard. Other items of equipment aren't mentioned in the regulations, but common sense dictates that you carry them: Anchor, line, paddle, first aid kit, flashlight, fenders, tool kit, extra can of fuel, compass and distress flares.

### Boating Accidents Decline Nationally

In May the Coast Guard announced the lowest boating accident fatality rate ever recorded. According to the Coast Guard's annual report *BOATING STATISTICS* (CG 357), the 1974 figure sets a record low rate of 16.9 fatalities per 100,000 recreational boats. The publication lists 1,446 persons as having lost their lives in boating accidents in 1974, a strong decline from the 1973 figure of 1,754.

Statistics indicate that there were 5,104 boating accidents involving 6,449 vessels. Resulting from these accidents were injuries to 993 persons and \$9,181,500 worth of property damage. The figures show a decrease from 1973 in most accident categories. The publication also covers statistics on accidents and injuries spanning the period from 1970 to 1974:

Included in the publication for the first time is data on boating activity exposure, which was derived from the first comprehensive nationwide boating survey, conducted in 1973. This information, as well as other, more detailed safety statistics, is contained in the Coast Guard's sixteenth annual report. Copies of *Boating Statistics—1974* (CG-357) are available from Commandant (G-BD-2), U. S. Coast Guard, Washington, D. C. 20590.

### Causes of Boating Accidents

1. Fault of operator
2. Fault of other person
3. Fault of hull
4. Fault of machinery
5. Fault of equipment
6. Weather conditions
7. Hazardous waters (includes submerged objects)
8. Wake of a passing vessel
9. Water skiing
10. Excessive drinking

### In Bad Weather, Head for Shore

Best thing for boatmen to do in case of bad weather is to stay in port. Here's what to do if bad weather catches you on the water:

Head for the nearest sheltered shore. If weather is very choppy, seat passengers on the lowest part of the vessel, keeping them as close to the centerline as possible and head into waves at reduced speed.

Should your motor fail, or if the sea is so strong you cannot make headway, attach a sea anchor from the bow to keep boat headed into the wind—a bucket or a shirt with sleeves knotted together attached to a line will do the job in an emergency.

Keep calm; panic spreads easily. A well-found small boat is capable of surviving nicely in bad weather if handled calmly and correctly.

### Five-year U.S. Boating Record

	1970	1971	1972	1973	1974
Fatalities	1418	1582	1437	1754	1446
Accidents	3803	3909	3942	5322	5104
Vessels Involved					
in Accidents	4762	4915	5044	6738	6449
Injuries	780	897	829	1599	993
Prop. Damage (millions)	8.17	9.02	7.11	11.39	9.18
Numbered Boats (Millions)	5.12	5.51	5.91	6.34	6.83



*Bird of the Month:*

*The*  
**SHORT-BILLED**  
**MARSH WREN**

By JOHN W. TAYLOR  
*Edgewater, Maryland*



**T**HE two marsh wrens offer a unique study in bird personality. Though quite similar in general appearance, the two differ markedly in behavior. The short-bill is quiet, shy and elusive; the long-bill is ebullient, aggressive and pompous.

Their voices reflect their temperament. The long-bill's song is a bubbly, gurgling chatter, delivered with such vigor that the effort often lifts the singer off its perch. The short-bill's song, when it is heard, is a dry, insect-like rattle, given without much enthusiasm.

Habitat requirements of the two differ as well. The short-bill likes shallow, sedgy marshes and grassy meadows, with little or no water beneath. The long-bill prefers the height and cover of cattails or big cord grass, often beside a running stream.

These habitat preferences are as good identification points as any. To further clinch the matter, check the stripe over the eye. If it is whitish and prominent, the bird is a long-bill; short-bills have a buffy irregularly striped crown, and is more buff-colored overall.

During migrations, the short-bill is liable to occur in dry, weedy pastures and even in hayfields. Early

May is the usual time to find them in such situations, but they are not at all predictable, and may spend the summer there. Most often, though, nesting occurs in boggy, marshy territory.

Obviously, then, the place to look for them locally is along the Chesapeake and its tributaries, at the drier edges of the salt marsh. It takes a good ear and a thorough search, but the lower Eastern Shore peninsula should be the most productive place to search. Inland, they are highly irregular, despite records in Lexington and Saltville.

Both species have the tendency to build a number of nests, in addition to the one in use. The constructions of the short-bill are easily distinguished: they are smaller, less bulky and composed of finer material than those of its relative. Tufts of grass are pulled over to form a somewhat conical cover. So concealed, the nests are not easy to find, unlike the conspicuous affairs of the long-bill.

Six pure white eggs, quite unlike the long-bill's chocolate brown ones, form the usual complement.

# MIDGETS OF THE BIRD WORLD



Ruby-throated Hummingbird;  
Nature's little helicopter is a mere  
3 inches long and can beat its  
wings 55 times a second.



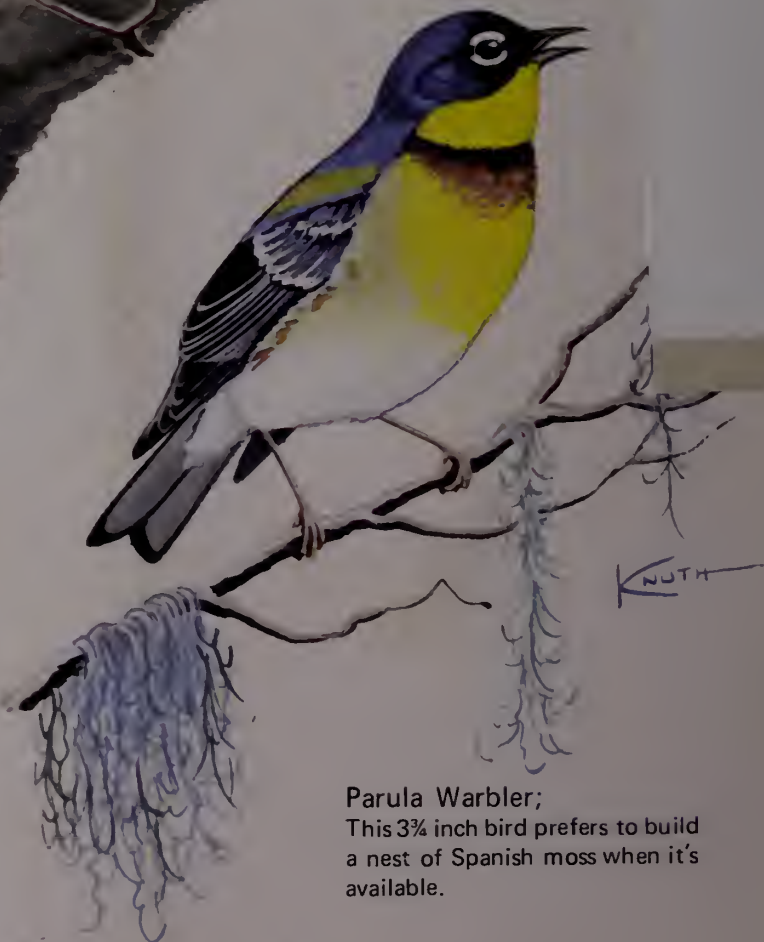
Golden-crowned  
Kinglet; This 3½  
inch ball of fluff  
prefers conifers.



Winter Wren;  
It is 3¼ inches in length and is  
found in brush piles and thick  
undergrowth in moist forests.



Brown-headed Nuthatch;  
Measuring 3½ inches, it often  
flocks with chickadees and  
warblers.



Parula Warbler;  
This 3¾ inch bird prefers to build  
a nest of Spanish moss when it's  
available.